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# Alaska Pulp Corporation Long-Term Timber Sale Contract

## Kelp Bay Draft Environmental Impact Statement

## Summary





# Summary

## Overview of Project

In compliance with Federal and State regulations, the U.S. Forest Service has prepared this draft Environmental Impact Statement (Draft EIS) on the effects of implementing the provisions of the Alaska Pulp Corporation Long-Term Timber Sale Contract Number 12-11-010-1545 in the Kelp Bay Project Area. The National Environmental Policy Act (NEPA) requires that (1) a range of alternatives for achieving the project's goal be put forth, (2) an analysis of the environmental impacts of each alternative be conducted, (3) measures to mitigate adverse impacts be discussed, and finally, (4) the views of interested members of the public be sought and incorporated into the final plan. This Draft EIS accomplishes the first three objectives. The process of achieving the final objective--seeking public interests and concerns--began with the issuance on March 1, 1990 of the Notice of Intent to proceed with the project and conduct the environmental analysis. Public scoping was conducted during March and April in 1990 to define the issues to be addressed in the Draft EIS. After this Draft EIS is published, a 45-day public comment period will take place during which written and verbal comments on the alternatives will be sought. During this same time, subsistence hearings, as required by the Alaska National Interest Lands Conservation Act of 1980, will be held in Sitka and Angoon, to hear from those whose subsistence use of resources may be affected by proposed activities.

## Purpose and Need for Action

The purpose of the Kelp Bay Project is to make timber available in accordance with the Alaska Pulp Corporation Long-Term Timber Sale Contract and applicable laws and regulations such as the National Forest Management Act, National Environmental Policy Act, and the Tongass Timber Reform Act. The actions analyzed in this Draft EIS are designed to implement direction contained in the Tongass Land Management Plan (TLMP). The environmental effects considered in this analysis include the effects of timber harvest and road construction on other resources. Opportunities for enhancement of fish and wildlife habitat and recreational opportunities associated with each alternative have also been identified.

Based on the environmental analysis, the Responsible Official (Michael A. Barton, Regional Forester, U. S. Forest Service, Alaska Region) will decide whether and how to make timber available from the Kelp Bay Project Area to meet contractual timber commitments. His decisions will include:



How much volume to make available under the contract in this area in one or more “timber offerings;”

- The location and design of timber harvest units;
- The location and design of mainline and local road systems;
- The location and design of Log Transfer Facilities (LTFs);
- Necessary standards and guidelines, mitigation measures, and enhancement opportunities for resources other than timber, and
- Whether there may be a significant restriction on subsistence lifestyles.

## Affected Area

The Kelp Bay Project area is located in the northeast corner of Baranof Island, approximately 25 air miles northeast of Sitka, and about 65 air miles southwest of Juneau. The Project Area encompasses the following Management Areas (MA) and VCUs described in the Tongass Land Management Plan: a part of MA C-41, which are VCUs 293 and 294; MA C-42, which is VCU 295; and, MA C-43, which includes VCUs 296, 297, 298, 314, and 315 (Figure 1-1 in Chapter 1).

## Availability of Documents

Documents upon which this Draft EIS was based, as well as files and planning records which are incorporated by reference into the Draft EIS, are available for review during regular business hours at the U.S. Forest Service, Tongass National Forest, Chatham Area, 204 Siginakwa Way, Sitka, Alaska. A limited number of the Draft EIS are available on request.

## Background

In 1956, the Forest Service and Alaska Lumber and Pulp, now the Alaska Pulp Corporation (APC), entered into a timber sale contract for a 50-year period between 1961 and 2011. Between 1971 and 1990, the Forest Service specifically planned and authorized logging, road construction, and related activities for successive 5-year periods. The Forest Service determined that these 5-year Operating Plans were major Federal actions significantly affecting the human environment, thus requiring preparation of an EIS under NEPA. EISs have been prepared for 5-year periods from 1976 to 1990.

During the 1980s, a series of court challenges interrupted implementation of the 1981 to 1986 and 1986 to 1990 APC Long-Term Timber Sale Contract EISs. During this time, controversy over management of the Tongass National Forest also became a national issue. In August 1989, the Forest Service and the APC renegotiated the terms of the APC contract. The result was two important changes in the method of environmental analysis for the 1990s: (1) the Forest Service is required to designate individual operating areas within the contract area boundary, and (2) minimum and maximum limits have been set for the timber volume to be



made available each year to the APC from all operating areas. For the period 1991 through 1996, the minimum volume available each year would be 240 million board feet (MMBF). After 1996, the minimum volume rises to 360 MMBF available on an annual basis.

The Tongass Timber Reform Act, signed into law on November 28, 1990, makes certain unilateral changes in the long-term timber sale contract with APC to make it more consistent with independent national forest timber sale programs. These changes will ensure that:

- Timber sale planning and environmental assessments regarding the contracts will be consistent with procedures for independent national forest timber sales;
- Harvesting a disproportionate amount of old-growth timber will be restricted;
- All timber offerings under each contract will be substantially harvested within 3 years, unless delayed by third party litigation;
- The Responsible Official will determine the location and size of timber sale units and the timing of timber harvest;
- APC may reject timber offered under the contract;
- Utility logs offered under the contracts are counted against contract volume requirements;
- Purchaser road credits are provided in a manner consistent with independent national forest timber sale procedures;
- The price of timber offered under the contracts is adjusted to be comparable with that of independent national forest timber sales; and
- Timber offered under the contracts meets economic criteria consistent with that of independent National forest timber sales.

In addition, the Tongass Timber Reform Act requires that a buffer zone be established of no less than 100 feet in width on each side of all Class I streams and on Class II streams that flow directly into a Class I stream in the Tongass National Forest. Class I streams provide habitat to anadromous fish and Class II streams provide habitat for resident fish. Commercial timber harvesting is prohibited within these buffers. Finally, Best Management Practices as defined in the Forest Service Region 10 Soil and Water Conservation Handbook (Forest Service, 1990e) will be used to protect riparian habitat on streams or portions of streams not protected by such buffer zones.

Under these changes mandated by court decisions and law, timber is made available for harvest from smaller, contiguous operating areas. This is in contrast to preparing a single EIS for the entire contract area as had previously been the case for the 5-year operating periods. The Kelp Bay Project Area was scheduled to be the first to be analyzed because (1) it was not being considered in legislation for wilderness or special LUD II designation; (2) sufficient time had elapsed since the earlier harvests in the Project Area, (3) fewer problems for subsistence users were anticipated in this area than in others, and (4) the area appeared to have sufficient volume to meet APC long-term contract commitments.

### Issues

As a result of public scoping meetings and consultation with municipal, State, and Federal agencies, the following issues were identified as requiring analysis in the Draft EIS:

1. **Social and Economic Stability** - what effects timber harvest activities will have on community employment and income, population, community stability, and lifestyles.
2. **Water Quality and Fish Habitat** - what effects harvest activities will have on water quality in streams which provide habitat to anadromous and resident fish.
3. **Subsistence** - whether proposed activities may significantly restrict the use of wildlife, marine life, and plants for subsistence purposes required under the Alaska National Interest Lands Conservation Act.
4. **Wildlife** - how proposed activities will affect key wildlife species and the habitats required to maintain wildlife populations.
5. **Scenic Quality** - whether activities will negatively affect areas viewed from popular recreation use areas and marine travel routes.
6. **Recreation** - how increased development would change the remote character of the Kelp Bay Project Area which makes it attractive to visitors.
7. **Marine Environment** - how the location of log transfer facilities, logging camps, and associated log sort yards would affect the marine environment.
8. **Timber** - how much timber is proposed for harvest, the condition of previously harvested stands, and the economic implication of entry into new stands.

### Development of Alternatives

At the heart of the development of the alternatives is a concept known as “New Perspectives.” New Perspectives is an attempt through using new silvicultural strategies and re-evaluating old ones to mimic natural ecological processes.

New perspectives looks at forest management on two levels: (1) the landscape level, which may be a VCU, watershed, or viewshed; and (2) the stand level, which deals with individual harvest units. Some tools employed at the landscape level may include maintaining large tracts of undisturbed old-growth by concentrating timber harvest in certain areas, minimizing the “edge-effect” by designing larger harvest units, and using beach fringe and stream buffers for corridors between blocks of old-growth wildlife habitat. Some tools employed at the stand level may include reducing harsh edges by unit placement and feathering edges of cutting units, looking for opportunities to retain small patches of uncut timber in harvest units (where feasible and practical), leaving snags in harvest units (where safety regulations allow), and using group selection cuts. All of these concepts were considered and used in final individual harvest unit and road design and selection of harvest units for the alternatives. Which tools will be used in which harvest unit will be determined at the time the detailed silvicultural prescription is written for each harvest unit.



## Summary of Alternatives

Five alternatives were developed based on public issues: four action alternatives and the No-action Alternative against which the others are measured.

### Alternative 1

This is the No-action Alternative. This alternative would not make additional timber volume available from the Kelp Bay Project Area for 1992. It also assumes that a similar timber volume would not be available from somewhere else within the APC Long-term Timber Sale Contract area for 1992. Selection of this alternative would not allow the Forest Service to meet minimum contract volume requirements.

### Alternative 2

Under this alternative, new harvest would be distributed as widely as possible throughout the Kelp Bay Project Area. It confines harvest solely to areas not previously harvested. This approach seeks to minimize adverse impacts on non-timber resources by providing distance between harvest units. Implementation of this alternative would schedule harvest of 5,094 acres in 130 harvest units for approximately 136,209 MMBF of timber, with an average unit size of 39 acres. Ten harvest areas would consist of harvest units or combinations of harvest units over 100 acres. Under this alternative, 90 miles of new road would be constructed and 30 miles of road would be reconstructed along with seven LTFs. This would result in an average of 1.1 MMBF/mile of road.

### Alternative 3

This alternative focuses development activities in the VCUs adjacent to Peril Strait (except for Lake Eva VCU), while maintaining the primitive and semi-primitive character of Cosmos Cove, The Basin, South Arm, Middle Arm, and the southern two-thirds of Catherine Island and Portage Arm. Development activities would be concentrated in fewer VCUs. Under this alternative, 4,537 acres would be scheduled for harvest in 109 harvest units, for approximately 121,073 MMBF of timber, indicating an average unit size of 42 acres. Eleven harvest areas would consist of harvest units or combinations of harvest units over 100 acres. Seventy-two miles of new road would be constructed and 23 miles would be reconstructed along with three LTFs. This would average out to 2.3 MMBF/mile of road.

### Alternative 4

This alternative emphasizes protecting non-timber resources. It protects recreation and fisheries values in the Twin Lakes and Little Lake Eva areas of VCU 296 by deferring timber harvest. Only those activities which would result in a low risk of adverse impacts would be proposed. Implementation of this alternative would schedule harvest of 3,291 acres in 102 units for approximately 86,355 MMBF of timber, averaging 32 acres per unit size. Three harvest areas would consist of harvest units or combinations of harvest units over 100 acres. For this level of harvest, 61 miles of new road would be constructed and 25 miles reconstructed along with six LTFs. This would result in an average of 1.1 MMBF/mile of road.

## Alternative 5

This alternative would harvest as much timber within the Project Area as possible, while still meeting project standards and guidelines. Under this alternative, 8,419 acres would be harvested in 205 harvest units for approximately 229,739 MMBF of timber, indicating an average unit size of 41 acres. Eighteen harvest areas would consist of harvest units or combinations of harvest units over 100 acres. To implement this level of harvest, 116 miles of new road would be constructed and 34 miles reconstructed, for an average of 1.5 MMBF/mile of road. Nine LTFs would be constructed.

Table S-1 shows the volume of timber by thousands of board feet and acres to be harvested under each action alternative:

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Table S-1  
**Volume of Timber (MMBF) To Be Harvested Under Each Alternative**

Alternative	Volume (MBF)	Total Acres
Alternative 1	0	0
Alternative 2	136,209	5,094
Alternative 3	121,073	4,537
Alternative 4	86,355	3,291
Alternative 5	229,739	8,419

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## Comparison of Alternatives

The comparison of alternatives presents the conclusions from the materials presented throughout the Draft EIS and summarizes the results of the analysis. This section focuses on a comparison of the alternatives issue-by-issue, based on the issues described in Chapter 1 of the Draft EIS. Chapter 4 contains the detailed evaluation of the potential effects of the action alternatives on each of these issues.

### Issue 1: Social and Economic Effects of Timber Harvest Activities

The baseline for comparing the alternatives is Alternative 1, the No-action Alternative. This alternative would not permit the Forest Service to meet minimum contract timber volume requirements to APC. Table S-2 displays the employment (jobs) and personal income (salaries) that would be associated with each alternative. The jobs and salaries listed include both those directly and indirectly dependent on the timber industry. The volume of timber harvest for each alternative results in a level of jobs and salaries associated with that volume. Employment is based on a wage value of \$23,200 per job. However, since Alternative 2 through 5 provide sufficient volume to maintain current mill operations, the jobs and salaries

estimated are current jobs and salaries. It is Alternative 1, which maintains no jobs, and provides for no personal income, which would result in a loss of employment in the affected communities. This loss of jobs and income would be between 585 and 1,523 jobs and between 13.6 and 35.3 million dollars could be lost.

None of the alternatives is expected to have a significant impact on the commercial fishing, recreation, or tourism industries.

Table S-2  
**Timber Industry Employment and Income for Each Alternative**

	1	2	Alternative 3	4	5
Total Volume Harvested (MMBF)	0	136	121	86	230
Employment (jobs)	0	928	826	587	1570
Personal Income (Million \$)	0	21.5	19.2	13.6	36.4

SOURCE: Thomas, 1991.

## Issue 2: Water Quality and Fish Habitat

All alternatives meet the requirements and intent of the Clean Water Act. The evaluation in Chapter 4 shows that the potential effects on water quality, stream temperatures, large woody debris recruitment, and stream nutrient cycles are minimal for all alternatives. Adherence to general BMPs and development of site-specific BMPs minimize the potential for impacts to these resources.

Chapter 4 compares factors that could result in short-term stream sediment increase causing some loss or impairment of resident and anadromous fish spawning and rearing habitat. On this basis, Alternative 1 has the lowest risk and Alternative 5 the highest risk.

## Issue 3: Subsistence

Based on potential direct and cumulative effects of timber harvest, there is a significant possibility of a significant restriction of subsistence use of deer in the Project Area under all alternatives. There is no significant possibility of restriction for other subsistence resources. Small informal public meetings held in Angoon helped identify areas of importance for subsistence. The U. S. Forest Service will hold subsistence hearings on this Draft EIS in Angoon and Sitka to give affected rural residents further opportunity to provide additional information concerning potential subsistence use impacts associated with the alternatives.



## Issue 4: Wildlife

The acres of wildlife habitat proposed for harvest from 1992 to 1995 and the percent reduction is shown in Table S-3. The major direct effect on wildlife habitat from all action alternatives is loss of old-growth and forest habitat. Impacts to other habitats were greatly reduced through unit and road design prior to alternative formulation. Table S-4 shows the potential reduction in habitat capability for the 11 key Management Indicator Species (MIS) found in the Kelp Bay Project Area. This table shows the current (1990) habitat capability and the estimated reduction in this capacity after the actions proposed would be implemented (year 1995). To 1995 all of the actions would decrease habitat capabilities less than 20 percent, and in most instances less than 10 percent.

Table S-3

### Acres and Percent of Wildlife Habitats Proposed for Harvest, by Alternative

Habitat	1		2		3		4		5	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
	Cut	Change	Cut	Change	Cut	Change	Cut	Change	Cut	Change
Beach Fringe	0	0	6	<1	0	<1	<1	<1	88	1
Estuary Fringe	0	0	48	<1	36	<1	8	<1	94	2
Old-Growth Forest	0	0	5,094	10	4,537	9	3,291	6	8,419	17
Riparian Forest	0	0	587	6	283	3	357	4	798	9
Alpine/Subalpine	0	0	32	<1	29	<1	16	<1	52	<1

SOURCE: Weber, 1991.

Note: Habitats overlap so Acres Cut column does not add up to reflect actual acres planned for harvest by alternative. For example, acres of old-growth that occur in the beach fringe are counted in the old-growth habitat, beach fringe habitat, and forested habitat.



Table S-4

**Potential Reduction In Habitat Capability for MIS in 1995,  
by Alternative**

	1	2	Alternative 3	4	5
Habitat Capability For:					
Sitka black-tailed deer					
Current 1990	2,446	2,446	2,446	2,446	2,446
Potential reduction in 1995	0	301	235	210	448
Mountain Goat					
Current 1990	89	89	89	89	89
Potential reduction in 1995	0	<1	0	<1	1
Brown Bear					
Current 1990	209	209	209	209	209
Potential reduction in 1995	0	5	4	3	9
Red Squirrel					
Current 1990	79,255	79,255	79,255	79,255	79,255
Potential reduction in 1995	0	4,399	3,910	2,722	7,920
Otter					
Current 1990	103	103	103	103	103
Potential reduction in 1995	10	<1	<1	1	3
Marten					
Current 1990	244	244	244	244	244
Potential reduction in 1995	0	15	13	11	27
Brown Creeper					
Current 1990	546	546	546	546	546
Potential reduction in 1995	0	53	33	766	641
Red-breasted Sapsucker					
Current 1990	10,137	10,137	10,137	10,137	10,137
Potential reduction in 1995	0	874	788	568	1,444
Hairy Woodpecker					
Current 1990	941	941	941	941	941
Potential reduction in 1995	0	87	82	58	157
Vancouver Canada Goose					
Current 1990	231	231	231	231	231
Potential reduction in 1995	0	8	1	5	12
Bald Eagle					
Current 1990	324	324	324	324	324
Potential reduction in 1995	0	2	2	1	9

SOURCE: Weber, 1981.

Note: Decrease in habitat capability to 1995 in Alternative 1 reflects past timber harvest only.

## Issue 5: Scenic Quality

Alternative 2 would enter the most VCUs (7), with timber harvesting and road building more widely distributed than under any other action alternative. Thus, there would be a moderate impact on the visual resource as a whole. VCUs 298 and 314 would fully meet assigned Visual Quality Objectives (VQOs). Portions of VCUs 293, 294, 296, 297, and 316 would not meet assigned VQOs. LTFs developed in Appleton Cove, Saook Bay, Hanus Bay, Bourbon Creek, Kelp Bay, South Kelp Bay, and Cosmos Cove would have a strong visual impact when viewed from a foreground distance, but little, if any, from a background view.

Alternative 3 would enter five VCUs. This alternative would maintain the visual resources in greater Kelp Bay in the condition that presently exists. There would be a major impact on the visual resources in Peril Strait from Appleton Cove to Catherine Island, and in Chatham Strait along the east shore of Catherine Island. VCUs 296, 297, and 298 would meet assigned VQOs, but portions of 293 and 294 would not. The LTFs that would be developed in Appleton Cove, Saook Bay, and Hanus Bay would have a strong visual impact when viewed within a foreground distance, but little, if any impact on background views.

Alternative 4 would enter six VCUs. This alternative would have a moderate impact on the visual resources in the Project Area. VCUs 298 and 315 would meet assigned VQOs; portions of VCUs 293, 294, 296, and 297 would not. LTFs developed in Appleton Cove, Saook Bay, Hanus Bay, Bourbon Creek, Kelp Bay, and South Kelp Bay would have a strong visual impact when viewed within a foreground distance, but little, if any, from a background view.

Alternative 5 would enter seven VCUs. The large-scale land disturbance caused by this alternative would have a strong impact on the viewable landscape of the Project Area. VCU 298 will meet the assigned VQO. Portions of VCUs 293, 294, 296, 297, 314, and 315 would not meet assigned VQOs. LTFs to be developed in Appleton Cove, Saook Bay, Hanus Bay, Bourbon Creek, Kelp Bay, South Kelp Bay, South Arm, North South Arm, and Cosmos Cove would have a strong visual impact when viewed from the foreground, but little impact from a background view.

## Issue 6: Recreation

Alternative 2 would result in approximately 16 percent of the area currently classified in the Primitive and Semi-Primitive, Non-Motorized Recreation Opportunity Spectrum (ROS) Class changing to Semi-Primitive, Motorized, and Roaded Modified. Use of boat anchorages in Appleton Cove, Hanus Bay, Cosmos Cove, and Kelp Bay would be affected for 3 to 5 years due to LTFs, logging camps, and log raft storage that would occur during timber harvest activities.

Under Both Alternatives 3 and 4, approximately 11 percent of the area currently classified as Primitive and Semi-Primitive, Non-Motorized would change to Roaded Modified. Use of boat anchorages in Appleton Cove and Hanus Bay for Alternatives 3 and 4, and also in Kelp Bay for Alternative 4, would be affected for 3 to 5 years because of LTFs, logging camps, and log raft storage.

Alternative 5 would result in approximately 18 percent of the area currently in the Primitive and Semi-Primitive, Non-Motorized ROS Class changing to Semi-Primitive, Motorized and Roaded Modified. Use of boat anchorages in Appleton Cove, Hanus Bay, Cosmos Cove, and Kelp Bay would be affected for 3 to 5 years from LTFs, logging camps, and log raft storage. There could also be an effect on Glacial River, which is a candidate for classification as a Wild and Scenic River.

## Issue 7: Marine Environment

A total of 12 potential LTF locations are considered for development. Figure S-1 shows the potential LTF locations by alternative and where they occur in relation to estuary or marine systems. Potential loss of habitat at each of the LTF sites under consideration would be less than 1 percent of the total estuary or marine habitat in the Project Area and is considered a negligible effect.

Figure S-1

### Potential LTF Locations and System in Which They Occur, by Alternative

VCU	LTF Name	Alternatives					System Impacted	
		1	2	3	4	5	Estuary	Marine
293	Appleton Cove <i>or</i>		●	●	●	●	●	
293	SE Rodman Bay <i>or</i>							●
292	Rodman Bay							●
294	Saook Bay		●	●	●	●		●
296/297	Hanus Bay <i>or</i>		●	●	●	●	●	
296/297	North Hanus Bay							●
298	Bourbon Creek		●		●	●		●
314	South Arm					●	●	
314	North Point					●		●
315	North Basin		●		●	●		●
315	South Basin		●		●	●		●
315	Cosmos Cove		●			●		●
	Total LTFs	0	7	3	6	9		

SOURCE: Burns, 1991.

## Issue 8: Timber

Table S-5 displays the estimated total volume that would be harvested under each alternative, and acres proposed for harvest by volume class. Volume Class 7 is not shown because it is not known to exist in the Kelp Bay Project Area. On the basis of estimated net timber value, Alternative 3 appears slightly better than Alternative 5. Alternative 2 has about half the net value of Alternatives 3 or 5. As currently designed, Alternative 4 would not be an economic offering. Table S-6 shows a summary of estimated value for each alternative.

Table S-5

## Acres Proposed for Harvest by Volume Class

Alt.	Est. Total Volume (MMBF)	Proposed Harvest Acres	Volume Class 4 Proposed Acres to be Harvested	Volume Class 5 Proposed Acres to be Harvested	Volume Class 6 Proposed Acres to be Harvested
1	0.0	0	0	0	0
2	136,209	5,094	2,756	2,234	104
3	121,073	4,537	2,386	2,125	26
4	86,355	3,291	1,783	1,492	16
5	229,739	8,419	4,248	3,939	232

SOURCE: Zaborske, 1991b.

Note: Volume Classes 1 through 3 (not shown) contain less than 8 MMBF per acre

Volume Class 4 contains 8 to 20 MMBF per acre

Volume Class 5 contains 20 to 30 MMBF per acre

Volume Class 6 contains 30 to 50 MMBF per acre

Table S-6

## Summary of Estimated Net Values by Alternative (\$/MBF)

Alternative	Estimated <sup>1</sup> Total Volume Harvested (MBF)	Estimated <sup>2</sup> Net Value (\$/MBF)	Rank
1	0	\$0	Null
2	136,209	\$20	3
3	121,072	\$40	1
4	87,355	\$30	4
5	229,738	\$40	2

SOURCE: Zaborske, 1991b.

Note: Negative values are shown in parenthesis ( )

<sup>1</sup> Subject to change based upon results of timber cruise made at time of offering.

<sup>2</sup> Subject to change based upon changes in market value and results of appraisal made at time of offering (rounded to the nearest \$10).

## Identification of the Forest Service Preferred Alternative

A Preferred Alternative has been identified from the range of alternatives presented in this Draft EIS. This Preferred Alternative and proposed action is Alternative 3. The identified Preferred Alternative will be examined before preparation of a Final EIS, taking into consideration public comments received, as well as additional information and analysis.





